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YORK Survey Supply

Autoranging Sound Meter

Code: 343000

Operating Instructions

Ref:.. \operat98\instructions 15\343000.qxp 05-01-15

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Autoranging Sound Meter
Operating Instructions

Introduction
Your digital sound level meter provides automatic or manual ranging 4 measurement ranges from 40 to 130dB, and features 0.1dB resolution.
The meter allows you to select between fast and slow response times and A and C weighting. A maximum hold function is provided.
Jacks on the meter provide AC analogue output.

Button Description

ON/OFF:	Power on or power off the meter.
RANGE:	Auto range/Manual range select key.
RECORD:	Record maximum and minimum sound level measurement.
WEIGHTING A/C:	A weighting and C weighting select key.
FAST/SLOW:	Response select key.
MAX HOLD:	Freeze maximum sound level reading.

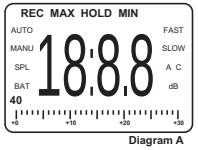

Diagram A

Measuring Sound Levels
Sound levels are displayed both digitally and in a bar graph. The digital display is updated every 160ms, while the bar graph is updated every 40ms.
1. Press the **ON/OFF** key to turn the meter on. The unit will first display the full screen and "**18:18.8**" then count down from **99.9** to zero. The meter will now begin measuring the current sound levels. **SPL** (Sound Pressure Levels) appears on the left side. "**A**", "**dB**" on the right side of the screen. Point the microphone toward the source of the sound to be measured.

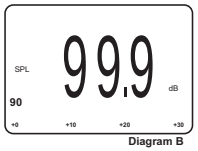

Diagram B

Selecting the Response Time
You can select how fast or slow response time to suit different applications and standards. For example, most OSHA-related testing is done using slow response time and A weighting.
When you turn the meter on, it will be in fast response mode. Press the **FAST/SLOW** key to toggle between fast and slow response.

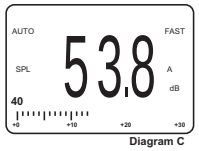

Diagram C

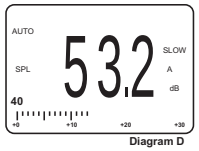

Diagram D

A small **FAST** or **SLOW** will be displayed on the right side of the screen to indicate the current mode.

Selecting A and C Weighting
When you turn the meter on, it will be in A weighting mode. A weighting enables the meter to respond in the same manner as the human ear, which increases and decreases amplitude over the frequency spectrum. Applications for A weighting include OSHA regulatory testing, environmental measurement, workplace design and law enforcement.
C weighting is suitable for flat response measurements with no increase or decrease of amplitude over the frequency spectrum. Applications for C weighting include the sound level analysis of engines and machinery.
Press the **WEIGHTING A/C** key to select between A and C weighting. A small **A** or **C** will be displayed on the right side of the screen to indicate the current mode.

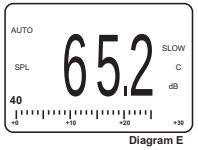

Diagram E

Freezing the Maximum Sound Level Reading
1. Press the **ON/OFF** key to turn the meter on.
2. When measuring sound levels, press the **MAX HOLD** key to freeze the maximum reading. **MAX HOLD** will be displayed. The digital display will remain unchanged until a higher reading is detected. Note that the bar graph will continue to record the current reading.
3. Press the **MAX HOLD** key again to exit maximum hold mode.

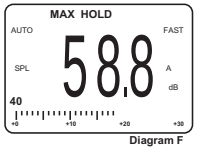

Diagram F

Recording the Maximum and Minimum Measurements
1. Press the **ON/OFF** key to turn the meter on.
2. Press the **RECORD** key. **RECORD REC** will be displayed on the top corner of the screen. The meter will begin tracking the maximum and minimum sound level measurements.
3. Press the **RECORD** key again. **MIN** will appear on the middle up of the screen and the minimum sound level measurement will be displayed. The unit is not recording at this time but the bar graph will continue to show the current reading.

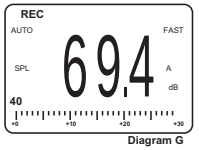

Diagram G

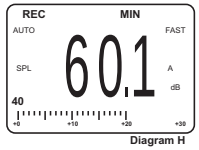

Diagram H

4. Press the **RECORD** key again. **MAX** will appear on screen side by the "REC" and the maximum sound level measurement will be displayed. The unit is not recording at this time but the bar graph will continue to show the current reading.

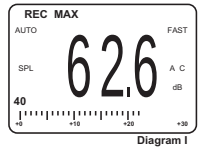

Diagram I

5. Press the **RECORD** key again to resume recording and repeat the process.
6. Press and hold the **RECORD** key until the **RECORD** indicator disappears to exit recording mode.

Selecting Automatic and Manual Ranging
The meter features 4 measurement ranges in 10dB steps: 40~70dB, 60~90dB, 80~110dB, 100~130dB.
When you turn the meter on, it will be in automatic range mode and a small **AUTO** will be displayed on the left side of the screen. In this mode, the meter will adjust the measurement range automatically for accuracy. The two digit number to the left of the bar graph on the LCD will show the low end of the current range. You can also set the range manually.

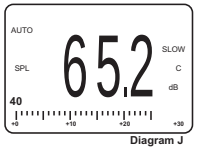

Diagram J

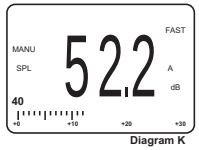

Diagram K

The meter will be able to take readings more quickly, because the unit does not need to first establish the range before displaying the measurement.
To adjust the range manually:
1. When measuring sound levels, press the **RANGE** keys as needed to adjust the measurement range. **MANU** will appear on the display. Note that the two digit number to the left of the bar graph will change to reflect the low of the newly selected range.
2. Press **RANGE** key to switch back to automatic ranging.
If the meter is operating in manual range and "**LO**" is displayed, the sound is too low for the range. If "**HI**" is displayed, the sound is too loud. In either case, you must adjust the measurement range or your readings will be inaccurate.

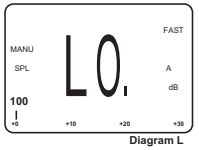

Diagram L

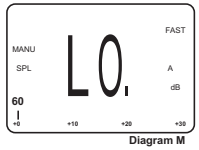

Diagram M

Automatic Shut-Off
The meter will automatically turn off after 20 minutes to preserve the battery.
To override this feature:
1. Make sure the unit is turned off.
2. Press the **ON/OFF** and **MAX HOLD** keys simultaneously.
3. When the full display appears, release the **MAX HOLD** key first, " " will replace full display.
4. Release the **ON/OFF** key. The meter will remain on until the **ON/OFF** key is pressed again. The automatic shut-off feature will resume the next time the meter is switched on.

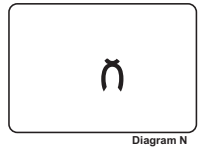
Diagram N

Calibration
Using a standard Acoustic Calibrator (Recommended B&K type 4231 model) which generates "94dB" output.
1) Set whichever time weighting: fast or slow.
2) Set sound level range at: 80~110dB.
3) Select weighting A or C.
4) Max. Hold function measurement mode unenabled.
5) Better to calibrate under 60dB sound environment.

Insert the microphone into the hole of the calibrator. Press calibrator ON/OFF key to power on, and adjust the CAL potentiometer of the unit, the level display will indicate the desired level. While selecting C weighting, display ±0.3dB deviation is reasonable.

Replacing the Battery
When the screen display "BAT" down at the left corner, the 9V battery has fallen to a critically low voltage level and should be replaced as soon as possible. Use a screwdriver to unscrew the back battery compartment cover. Insert a fresh 9V battery and screw the cover.

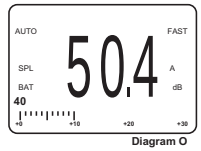

Diagram O

WARRANTY
We warrant this product against defects in materials and workmanship for a period of one year from the date of purchase, and agree to repair or replace any defective unit without charge. This warranty does not cover probes, batteries or damage resulting from accident, misuse, or abuse of the product.

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